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VOL. 13 No. 6

February 8, 1963

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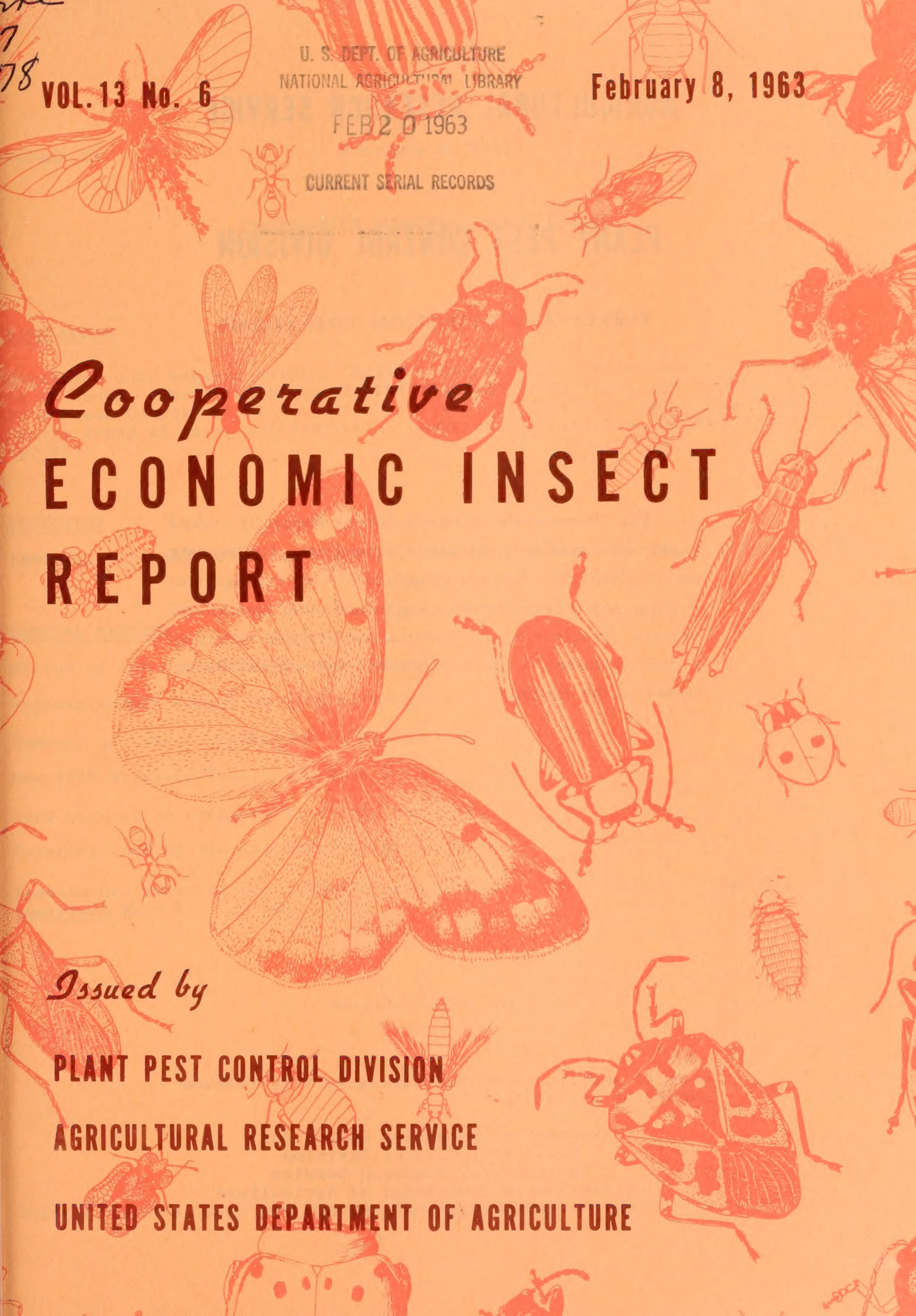

Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 13 February 8, 1963 Number 6

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Continued cold weather holding GREENBUG and other aphids at noneconomic levels in Oklahoma. New infestation of MEDITERRANEAN FRUIT FLY found at Boynton Beach, Palm Beach County, Florida, with trapping of adult female January 29. Additional larvae found at known infestation at Lauderdale-by-the-Sea, Broward County. (p. 87).

DETECTION

IMPORTED FIRE ANT collected for first time in Hernando County, Florida. (p. 90).

SPECIAL REPORTS

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Soybean Insect Survey as Used in Arkansas. (p. 91).

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Interceptions of Special Interest at U. S. Ports of Entry. (p. 97).

Insects Not Known to Occur in the United States (wheat chafer, Anisoplia austriaca Hbst.). (p. 98).

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Reports in this issue are for week ending February 1, unless otherwise indicated.

WEATHER BUREAU 30-DAY OUTLOOK

FEBRUARY 1963

The Weather Bureau's outlook for February calls for above-normal temperatures to prevail over the southwestern quarter of the Nation and about normal over the Northwest. This appreciable moderation, compared to January, will penetrate only occasionally into the eastern half of the Nation where temperatures are expected to fluctuate widely but average below seasonal normals. Precipitation is expected to exceed seasonal normals over most of the area lying west of the Continental Divide and also along coastal areas from the Virginia Capes northward. On the other hand, subnormal precipitation is indicated for the Great Lakes region, the southern Plains and the Gulf States. In unspecified areas, about normal precipitation is anticipated, frequently in the form of snow.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price $4.80 a year, $2.40 a half year.

WEATHER OF THE WEEK ENDING FEBRUARY 4

Sharp temperature fluctuations occurred east of the Rocky Mountains last week, and average temperatures were a few degrees higher than for the previous week. Nevertheless, this was the third consecutive unusually cold week, with averages as much as 18° below normal in the Midwest. Cold waves moved across the area early and late in the week, bringing subzero minima southward to the central Great Plains and the Ohio Valley. Temperatures averaged above zero in Wisconsin for the first time in 3 weeks, and many frozen pipes and sewers were reported in the State. In western Kansas, temperatures in some locations rose 95° from January 27 to February 1, and Dodge City's 86° on Friday was a record high there for February. Minneapolis, Minnesota, had 21 consecutive days with minima zero or lower, a new record. The weekend cold wave brought another damaging freeze to the lower Rio Grande Valley, with a low of 26° at Rio Grande City. Average temperatures in the Far West were higher than last week generally by 10° to 20° and were as much as 12° above normal in the Great Basin after 3 abnormally cold weeks there.

The rise in temperatures in the Far West was accompanied by heavy precipitation which brightened the outlook for irrigation water. Some locations in Utah had record rainfalls, with Deer Creek recording 5.08 inches in 24 hours for a new State record. Heavy rains caused widespread flooding in southern Idaho the latter part of the week. Severe local flooding also was reported near Reno, Nevada. Snowfall increased the snowpack in the Sierras and Cascades, but it still remains below normal.

Precipitation east of the Rockies was again mostly limited to the Appalachian region and the Atlantic and Central and East Gulf Coastal States. Glaze made roads slick in parts of the Midwest and South early in the period and in the Northeast over the weekend. The snow cover melted in Kansas and in the plains of Colorado, Wyoming, and western Nebraska and South Dakota. Chinook winds with temperatures up to 64° in Wyoming removed the snow from lower levels and caused snowslides in the mountains. Snow also melted in most of Missouri and the Ohio Valley, and depths decreased slightly in areas farther north. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GREENBUG (Schizaphis graminum*) - OKLAHOMA - Continued cold weather holding populations at noneconomic levels throughout State. Highest counts ranged 8-15 per linear foot in Wagoner and Muskogee Counties. Many observations in north central, west central and northwestern areas negative, with numerous dead aphids present in some areas. (Okla. Coop. Sur.).

CORN LEAF APHID (Rhopalosiphum maidis) - NEW MEXICO - Generally light in barley fields near Animas, Hidalgo County. Ranged 5-15 per linear foot of row. (N. M. Coop. Rpt.). FLORIDA - Severe on 3 acres of sorghum at Bonita Springs, Lee County, January 17. (Fla. Coop. Sur.).

GRAIN APHIDS - OKLAHOMA - APPLE GRAIN APHID (Rhopalosiphum fitchii), ENGLISH GRAIN APHID (Macrosiphum avenae*), and CORN LEAF APHID (Rhopalosiphum maidis) populations continue at very low levels throughout State. (Okla. Coop. Sur.).

WINTER GRAIN MITE (Penthaleus major) - OKLAHOMA - Occasional specimens found in small grains checked in north central areas. (Okla. Coop. Sur.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEW MEXICO - Only an occasional aphid found in alfalfa near Animas, Hidalgo County. (N. M. Coop. Rpt.). OKLAHOMA - Negative in field of seedling alfalfa in Kay County heavily infested in earlier checks. (Okla. Coop. Sur.).

ARMY CUTWORM (Chorizagrotis auxiliaris) - OKLAHOMA - Low populations of 0-2 per linear foot observed in fields checked in Garfield, Alfalfa, Grant, Kay and Noble Counties. Heavier, localized population reported in winter peas in Garfield County. (Okla. Coop. Sur.).

FRUIT INSECTS

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - FLORIDA - New infestation located at Boynton Beach, Palm Beach County, with trapping of adult female January 29. Four more larvae collected January 22 in calamondin at known infestation at Lauderdale-by-the-Sea, Broward County. (Fla. Coop. Sur.).

MEXICAN FRUIT FLY (Anastrepha ludens) - MEXICO - Total of 6,277 inspections of 1,848 traps in the States of Baja California and Sonora negative. Incidental inspecion of fallen fruit in Baja California also negative. (PPC, Mex. Reg., Dec. Rpt.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Biological Control Zone - Total of 255 trees on 3 properties found lightly infested in State of Tamaulipas. Parasites survived treatments in grove in Padilla, Tamaulipas, in sufficient numbers to control remaining citrus blackfly. Chemical Control Zone - Total of 108,294 citrus trees inspected on 2,624 properties in the States of Baja California, Sonora, Tamaulipas, Nuevo Leon and Coahuila negative. Quarantine stations at Linares, Nuevo Leon, intercepted many trucks with large amounts of citrus fruit with leaves from Veracruz State; leaves frequently found with live forms of citrus blackfly. (PPC, Mex. Reg., Dec. Rpt.).

ITALIAN PEAR SCALE (Epidiaspis piricola) - CALIFORNIA - Medium on walnut trees in Gilroy, Santa Clara County. (Cal. Coop. Rpt.).

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* See CEIR 13(5):84.

TRUCK CROP INSECTS

CABBAGE APHID (*Brevicoryne brassicae*) - GEORGIA - Light on cabbage and collards in Thomas County. (Johnson).

TOBACCO INSECTS

TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) - GEORGIA - Light feeding on tobacco in the seedbed noted in Tift, Berrien, Cook and Thomas Counties. (Johnson).

COTTON INSECTS

PINK BOLLWORM (*Pectinophora gossypiella*) - MEXICO - Gin trash inspections in the States of Sonora and Baja California and in southern part of Tamaulipas negative; inspections terminated. Inspection of debris in 42 fields comprising 5,915 acres in the States of Tamaulipas, Nuevo Leon and Coahuila yielded 75 specimens. Lint cleaner inspections in Sonora and southern Tamaulipas negative. (PPC, Mex. Reg., Dec. Rpt.). FLORIDA - Infesting *Hibiscus* sp. south of Key Largo, Monroe County, January 22. Det. by W. Breidenbach. (Fla. Coop. Sur.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BLACK CITRUS APHID (*Toxoptera aurantii*) - FLORIDA - Severe on *Murraya exotica* at Davenport, Polk County (Jan. 17), and light on *Hamelia erecta* at Ft. Lauderdale, Broward County (Jan. 20). (Fla. Coop. Sur.).

SPIREA APHID (*Aphis spiraecola*) - CALIFORNIA - Populations heavy on *Viburnum* sp. in Stockton, San Joaquin County. (Cal. Coop. Rpt.).

AN APHID (*Cinara tujafilina*) - FLORIDA - Infested arborvitae (*Thuja* sp.) at Clewiston, Hendry County (Jan. 21). (Fla. Coop. Sur.). OKLAHOMA - Causing honeydew secretions on arborvitae in areas about Durant, Bryan County, and Stillwater, Payne County. (Okla. Coop. Sur.).

PINE TORTOISE SCALE (*Toumeyella numismaticum*) - FLORIDA - Light on *Pinus* sp. at Brooker, Bradford County (Jan. 4). (Fla. Coop. Sur.).

FERN SCALE (*Pinnaspis aspidistrae*) - CALIFORNIA - Heavy on staghorn fern locally in San Diego, San Diego County. (Cal. Coop. Rpt.).

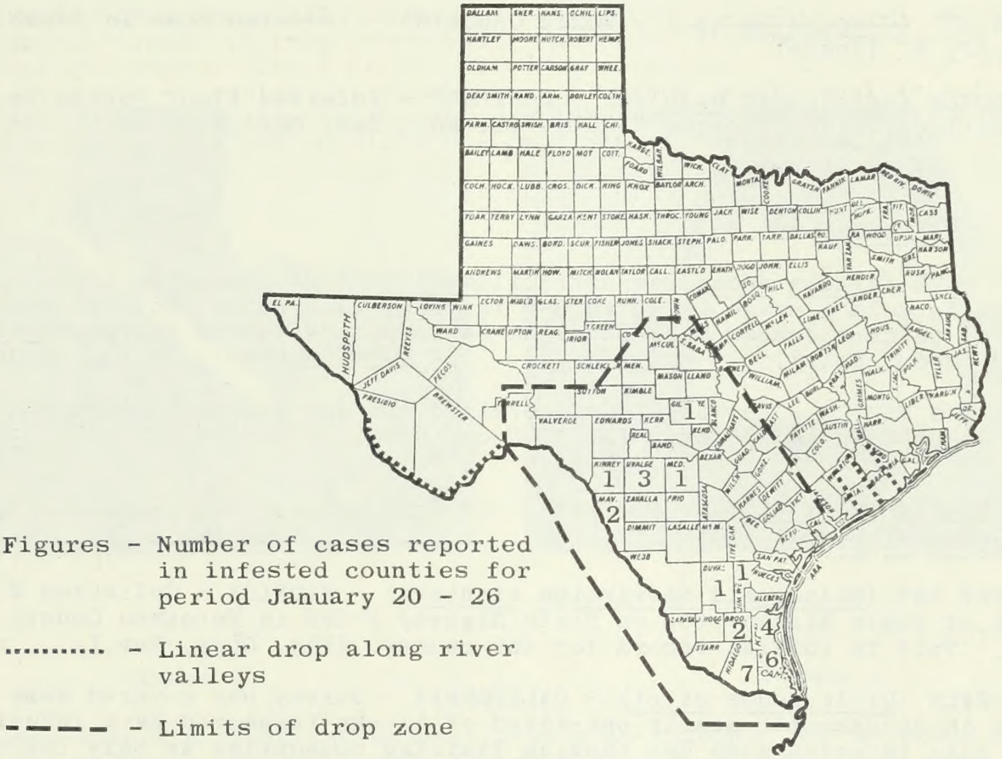
A MEALYBUG (*Pseudococcus nipae*) - CALIFORNIA - Heavy on nursery stock of *Cordyline* sp. in Santa Barbara, Santa Barbara County. (Cal. Coop. Rpt.).

Coccids in Florida - *Chrysomphalus aonidum* infested *Aucuba* sp. at Palatka, Putnam County (Jan. 18), and was severe on *Camellia japonica* at Apopka, Orange County (Jan. 22). *Ceroplastes floridensis* was moderate on *Fortunella margarita* at Davie, Broward County (Jan. 9). *Kuwanaspis pseudoleucaspis* infested *Bambusa* sp. at De Land, Volusia County (Jan. 15). *Pseudaulacaspis pentagona* infested twigs of *Prunus persica* at Sanford, Seminole County (Jan. 10), and at Lake Como, Putnam County (Jan. 16); and was moderate on *Ligustrum* sp. at Zephyrhills, Pasco County (Jan. 25). (Fla. Coop. Sur.).

INSECTS AFFECTING MAN AND ANIMALS

STATUS OF THE SCREW-WORM (Cochliomyia hominivorax) IN THE SOUTHWEST

The number of samples received for identification continues to decline each day. A total of 29 samples was received from 11 counties in Texas during the period January 20-26. The specimens received from the northern region during the early part of the period were from eggs oviposited prior to the severe cold weather. The cold weather continues to hamper fly release in the northern area; however, flies are being released in this region, as weather permits, at rate of 1,000 per square mile. A total of 65,313,950 sterile flies was released during the period January 20-26, with 29 screw-worm cases confirmed during the same period. (Anim. Dis. Erad. Div.).



Figures - Number of cases reported in infested counties for period January 20 - 26

.... - Linear drop along river valleys

— — — — - Limits of drop zone

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Activity continues throughout State. Counts observed per head, were as follows: 0-8 at Ponca City, Kay County; 0-17 (average 4) at Stillwater, Payne County; 5 in Pushmataha County. (Okla. Coop. Sur.). TEXAS - Counts per animal on mature, untreated animals ranged 4-21 in Navarro County and 6-12 in Walker County. (Ridgway).

CATTLE LICE - OKLAHOMA - Several species heavy on majority of cattle checked in Pushmataha County; light to heavy infestations reported from Grady, Cotton, Hughes and Haskell Counties. None observed on yearling steers and dairy animals checked in Stillwater area, Payne County. (Okla. Coop. Sur.). UTAH - Undetermined species annoying to cattle herd in western Millard County. (Knowlton).

HOG LOUSE (Haematopinus suis) - OKLAHOMA - Populations continue light in Kingfisher and Beckham Counties. (Okla. Coop. Sur.).

CRAB LOUSE (Phthirus pubis) - MARYLAND - Extensive infestation reported from household at Cumberland, Allegany County. (U. Md., Ent. Dept.).

A SPRINGTAIL (Hypogastrura pseudarmatus) - NORTH CAROLINA - Undetermined species reported in CEIR 13(4):46 as sufficiently numerous in poultry watering troughs to be troublesome, determined as this species by D. L. Wray. (Mount).

BLACK-LEGGED TICK (Ixodes scapularis) - FLORIDA - Collected from dog at Travernier, Monroe County (Jan. 25). (Fla. Coop. Sur.).

HOUSEHOLD AND STRUCTURAL INSECTS

BOXELDER BUG (Leptocoris trivittatus) - UTAH - Very annoying in several homes at Hyrum, Cache County, and in some residential areas southeast of Salt Lake City. (Knowlton).

A CARPENTER ANT (Camponotus sp.) - NORTH CAROLINA - Infested home in Randolph County January 8. (Jones).

OLD-HOUSE BORER (Hylotrupes bajulus) - MARYLAND - Infested floor joists in home at Mitchellville, Prince Georges County. (U. Md., Ent. Dept.).

STORED-PRODUCT INSECTS

DRIED-FRUIT MOTH (Vitula edmandsae serratilineella) - CALIFORNIA - Light on dried peaches held in cold storage in warehouse in Vacaville, Solano County. Several tons of dried peaches dumped because of no satisfactory method of reconditioning fruit. (Cal. Coop. Rpt.).

WIREWORMS - NEW MEXICO - Larvae of undetermined species abundant in sacked feed at several ranches in Lea County. (N. M. Coop. Rpt.).

MISCELLANEOUS INSECTS

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - FLORIDA - Collected 2.4 miles north of State Highway 595 on State Highway S-595 in Hernando County on January 21. This is initial record for the county. (Fla. Coop. Sur.).

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - Survey has covered some 800 city blocks in Sacramento; nearly one-third of blocks inspected have infestations. Apparently main infested area now showing limiting boundaries as only few blocks have been added. With buffer blocks included in eradication treatment, some 400 blocks will be treated. Spray crews currently operating in area, with over 50 blocks treated. Additional crews will be added as men and equipment become available. With favorable weather, program will be completed in time to allow safety margin before spring emergence. Public relations very favorable to date. This cooperation reflects unusually heavy infestations of other whitefly species which have been experienced past 2 years. (Cal. Coop. Rpt.).

AN EARWIG - NEW MEXICO - Infestation of undetermined species found in dairy barn near Eunice, Lea County. (N. M. Coop. Rpt.).

LIGHT TRAP COLLECTIONS

SOUTH CAROLINA - Charleston (Jan. 28 - Feb. 3) - ARMYWORM (Pseudaletia unipuncta) - 13; GRANULATE CUTWORM (Feltia subterranea) - 5.

Soybean Insect Survey as Used in Arkansas

The plant-shaking method of survey for soybean insects has been used in Arkansas for several years. With the very extensive increase in soybean acreage, work was conducted to improve the method by the use of certain equipment. The equipment consists of a piece of heavy white or off-white cloth. Each end of the cloth is folded over a thin piece of one-inch wood and sewn tight so that wood will not slip out of the fold. The finished piece of equipment is 24 x 42 inches with the ends rigid. This cloth can then be rolled together and easily handled as shown in figure 1. As shown in figure 2, the cloth can be unrolled to any length up to 42 inches to fit any row width. Row widths vary, however. Most of the fields in Arkansas are planted in 38 or 40-inch rows.

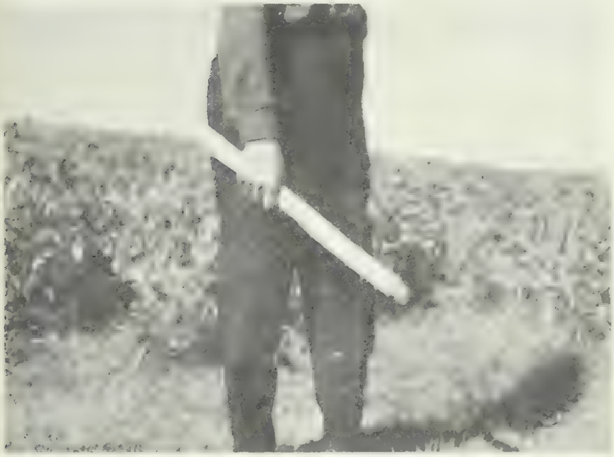


Figure 1

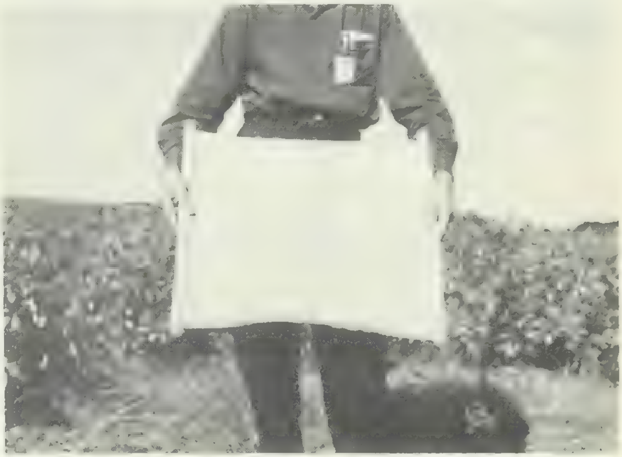


Figure 2

The surveyor enters a field and selects a site at random. For soybeans standing upright, the surveyor stands between two rows facing parallel with the rows. He then unrolls the cloth and slides it forward at ground level under undisturbed plants. The surveyor then kneels down, extends each arm forward parallel with the row on either side, and vigorously shakes the vines over the cloth. See figure 3. Approximately one and one-half row feet of plants on each row are shaken to give a sample of three row feet. The plants are then pushed back from over the cloth and the insects on the cloth are counted. To provide better light the surveyor may stand upright with the cloth above the tops of the plants.

In many cases in Arkansas, the plants tend to lean over. This may occur as a result of vigorous growth on the more fertile soils. Other causes according to agronomists are late planting, thick stands, or a combination of both. In these fields, the surveyor faces perpendicularly to a row in oppossite direction of the leaning plants. The cloth is carefully placed under the leaning plants, with the longer dimension parallel with the row. Plants on three row feet of the one row are shaken as described above. See figure 4.

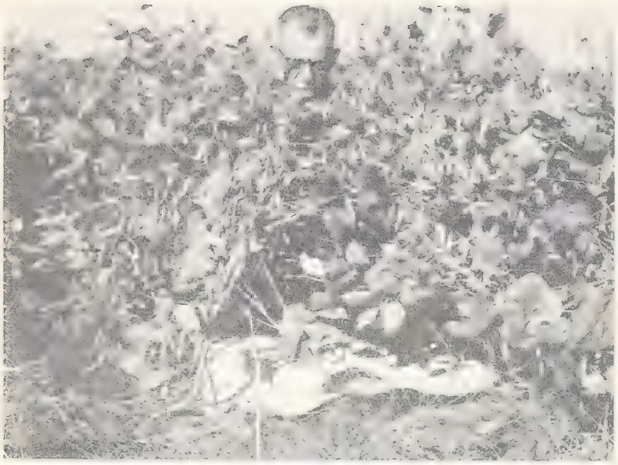


Figure 3

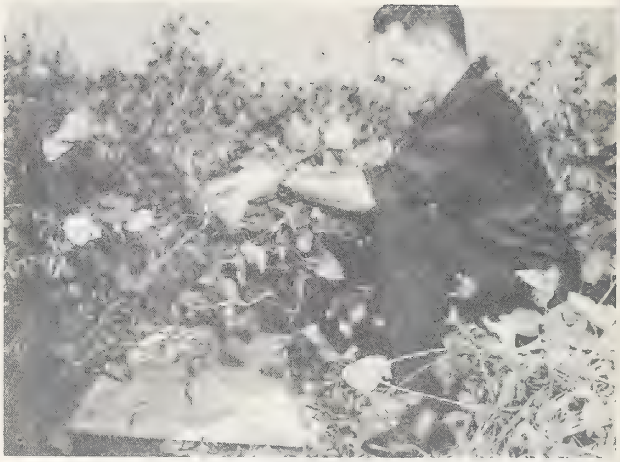


Figure 4

Additional sites are selected at random until a minimum of 10 sites have been sampled at locations to give field coverage. Infestations are reported as to number of the various species found on 30 row feet.

This method has proved satisfactory for the various species, except three-cornered alfalfa hopper (*Spissistilus festinus*) adults which are easily disturbed and fly too quickly. The method seems satisfactory for nymphs of this species.

In sampling fields infested with corn earworm (*Heliothis zea*) larvae, the surveyor must look carefully for large larvae which may fall near the base of the plants or in the opposite middles and miss the cloth. Only large larvae are likely to do this and are easily seen.

In surveying for stink bugs, field coverage is very important as infestations may be very uneven. Special attention should be given to areas in the field near timber. Very vigorous shaking is required for stink bug survey.

The use of the cloth is much better than shaking the insects on the ground, especially if there are cracks in the soil or there is debris on the ground. (W. P. Boyer and W. A. Dumas).

CEIR 13(6):2-8-63

SUMMARY OF INSECT CONDITIONS IN HAWAII - 1962

Submitted by the Hawaiian
Entomological Society*

Highlights: New immigrant insect pests were reported during the year while recently established immigrant pests spread to the neighbor islands. LAWN ARMYWORM infestations were generally sporadic, but caused heavy damage in some areas on Oahu. Reports of damage to showertrees and litchi by a TWIG-BORING EUCOSMID MOTH (Crytophlebia sp.) increased somewhat. Heavy infestations of BLACK CUTWORM were reported on Kauai and Hawaii. Rapid establishment of introduced beneficial insects promised effective control of some of the insect and weed pests. Of special interest was a rare noctuid collected at the Kokee Tracking Station, Kauai. The specimen was sent to Dr. E. L. Todd, USDA taxonomist, Washington, D. C., who commented as follows: "The very unusual noctuid collected at Kokee, Kauai....is apparently an undescribed species."

Cereal and Forage Insects: A BILLBUG (Sphenophorus venatus vestitus), confined to Oahu until recently, spread to Kauai, Molokai, and Maui. On Oahu, it caused severe damage to several acres of sugarcane seedlings at the Hawaiian Sugar Planters Association Substations at Kailua and Kunia, Oahu. This pest seriously damages lawn grasses and has been reported from other graminaceous hosts in the Southeastern States, but this is the first record of damage to sugarcane. The RUSTY PLUM APHID (Hysteroneura setariae), a vector of sugarcane mosaic, was reported for the first time from island of Hawaii. It is established on Oahu and Molokai. A heavy infestation of LAWN ARMYWORM (Spodoptera mauritia acronyctoides) was found damaging Tifton 358, a relatively new lawn grass, at Waialae Nui, Oahu, during the latter part of August. Earlier, 33 acres of lawn surrounding a housing area in Pearl City (Oahu) were almost completely denuded. On Kauai, damage to nightblooming-cereus, "airplant" and sedum by BLACK CUTWORM (Agrotis ipsilon) was reported and, on the island of Hawaii, two plots of trefoil and clover seedlings in an experimental planting were destroyed. Honokaa Sugar Company also reported heavy damage to a newly planted area of sugarcane by this cutworm.

Forest, Ornamental and Shade Tree Insects: A STINK BUG (Brochymena quadripustulata) was collected in Lualualei Valley, Waianae, Oahu, in October, a first report of this pentatomid from the State. B. quadripustulata is widely distributed across the continental United States, southern Canada and northern Mexico. Hosts include pines, sumac, mountain ash, elm, oak, willow, cherry, apple, pear and grape; it is also predaceous on soft-bodied larvae. The COFFEE TWIG BORER (Xyleborus morstatti) gradually increased its range from Kailua to the adjacent district of Kaneohe but still appears to be confined to Oahu. Reports of damage to ornamentals by a NOCTUID (Achaea janata) continued through the early part of the year. Considerable reduction in populations of a CONIFEROUS TWIG APHID (Cinara carolina) on loblolly pine seedlings on Maui and Molokai was noted; however, on Molokai the GREENHOUSE THRIPS (Heliothrips haemorrhoidalis) caused heavy damage to plantings of Monterey pine where much killing of needle clusters was observed.

A CICADELLID (Protalebrella braziliensis), first reported in September 1960, caused heavy damage to Lippia canescens, a low-growing plant commonly used for ground cover. This is the first record of damage by P. braziliensis in Hawaii.

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* Coordinated by the Entomology Branch, State Department of Agriculture, with University of Hawaii, Pineapple Research Institute and Hawaiian Sugar Planters Association cooperating.

Truck Crop Insects: The SOUTHERN GREEN STINK BUG (*Nezara viridula*) is now firmly established on Oahu and has spread to Kauai. Unconfirmed reports indicate that it may also be established on Molokai. Its rapid spread, destructiveness and increasing host list make *Nezara* one of the most destructive immigrant pests in Hawaii in recent years.

Insects Affecting Man and Animals: First recovery of a MOSQUITO (*Aedes vexans nocturnus*) from an outer island (Kauai) was reported in April. *A. vexans nocturnus* was first discovered on Oahu in January. Also on Kauai, two additional "firsts" were reported; the SHORT-NOSED CATTLE LOUSE (*Haematopinus eurysternus*), a new pest record for the island, and another CATTLE LOUSE (*Solenopotes capillatus*) collected from a young calf at Kipu Ranch in July, a new record for the State. On Maui and Hawaii, the NORTHERN CATTLE GRUB (*Hypoderma bovis*) was reported increasingly active. Cattle were observed running frantically trying to escape fly attacks.

Mass nocturnal flights of SCIARID MIDGES (*Sciara garretti*, *S. spatitergum* and *S. radicum*) in astronomical numbers were reported in Naalehu (Hawaii) and nearby areas during the last week of January and first week of February. The midges were reported so numerous that they obscured headlights and coated windshields of vehicles.

Beneficial Insects: Introduced beneficial insects continued to exert heavy pressure on the weed pests, lantana and emex, on Hawaii and Maui during the early part of the year. However, dry weather conditions throughout the State during the second half of the year seriously retarded activities by these insects.

On Kauai, a FLOWER-FEEDING TEPHRITID (*Tetraeuaresta obscuriventris*), introduced from Fiji for the control of *Elephantopus mollis*, a serious weed pest, was recovered a short two months after its release. Another rapid establishment (Kauai) was the recovery of the introduced PUNCTUREVINE WEEVIL (*Microlarinus lareynii*) to control puncturevine, *Tribulus terrestris*. Introduced and released in August, it was recovered in late September at Kekaha where large numbers in all stages of development were collected from seeds that were recently separated from plants. The introduced LANTANA HISPID (*Uroplata girardi*) appeared to be established at east Lawai Valley, Kauai.

On Hawaii, a SEED-FEEDING BRUCHID (*Bruchus atronotatus*) was recovered from Christmasberries in Kau in August. This is the first recovery of this introduced weevil and the second insect to become established on this range weed pest. In October, *B. atronotatus* was recovered at Heeia, Oahu, the first recovery for this island. The introduced SCIOMYZID FLY (*Sepedon macropus*), a liver fluke snail predator, continued to flourish in the State. Large numbers of this snail killer were observed at Kawainui Swamp in March, and one specimen was swept from *Batis maritima* in the old Hawaiian salt beds of Kahua Ranch, Ewa, Oahu, in October. It was the first recovery of an adult in an area nearly four miles from the nearest release site.

New 1962 Maryland Insect and Mite Records

by

T. L. Bissell, W. C. Harding, Jr., and C. W. McComb 1/

1. *Apion hibisci* Fall (COLEOPTERA: CURCULIONIDAE) 2/

   Collected from *Hibiscus oculiroseus* by T. L. Bissell at Lexington Park, St. Marys County, September 4, 1960. Determined by R. E. Warner.

2. *Brevipalpus phoenicis* (Geijskes) (ACARINA:TENUIPALPIDAE) 3/

   Collected from palm inside a greenhouse by C. W. McComb at Catonsville, Baltimore County, October 23, 1961. Determined by E. W. Baker.

3. *Eotetranychus carpini* (Oudemans) (ACARINA:TETRANYCHIDAE) 3/

   Collected from elm by C. W. McComb at Rockland, Baltimore County, October 10, 1961. Determined by E. W. Baker.

4. *Lepidosaphes yanagicola* Kuwana (HOMOPTERA:DIASPIDIDAE) 2/

   Collected from *Pachysandra* sp. (in cold frames) by C. W. McComb at Towson, Baltimore County, April 17, 1962. Determined by H. Morrison.

5. *Miccotrogus picirostris* (Fabricius) (COLEOPTERA:CURCULIONIDAE) 2/

   Collected from soil around ladino clover by A. L. Steinhauer at Fairland, Montgomery County, June 15, 1962. Determined by R. E. Warner.

6. *Schizolachnus lanosus* Hottes (HOMOPTERA:APHIDAE)

   Collected from *Pinus taeda* by T. L. Bissell at Lexington Park, St. Marys County, July 21, 1960. Determined by F. C. Hottes.

1/ Department of Entomology, University of Maryland, College Park, Maryland.

2/ Previously published in the Cooperative Economic Insect Report.

3/ Intercepted on plant material, establishment uncertain.

1962 Occurrence of Brood II of the Periodical Cicada in Maryland

by

T. L. Bissell, W. C. Harding, Jr., and C. W. McComb 1/

County	Localities Where Specimens or Injury to Plants Were Observed 2/
Anne Arundel	Annapolis (Severn Grove), Epping Forest.
Charles	Route 224 (Douglas Point to Chixamuxen), Hilltop, Welcome, La Plata, Port Tobacco, Pomfret, Turkey Hill Road, Grosstown, Brice.
Calvert	Prince Frederick, Barstow, Bowens, Port Republic, St. Leonard, Island Creek, Lusby, Solomons.
Prince Georges	Aquasco 3/, Eagle Harbor 3/.
St. Marys	Charlotte Hall, Mechanicsville, Thompson Corner, Oaks, Golden Beach, Harpers Corner, Oakville, Sandgates, Hillville, Hollywood, Drumcliff, California, Town Creek, Lexington Park, Carver Heights Run, Scotland, Ridge, Drayden, Great Mills, Route 5 (Red Gate to Leonardtown), Turntop Hill, McIntosh Road, Dynard, Avenue and Abell.

1/ Department of Entomology, University of Maryland, College Park, Maryland.

2/ Underlined localities indicate moderate to heavy infestations.

3/ Not verified.

INTERCEPTIONS OF SPECIAL INTEREST AT U. S. PORTS OF ENTRY

Some important interceptions that were reported by the Plant Quarantine Division, ARS, USDA, on November 30, 1962, follow. These reports are based on the identifications received from Federal taxonomists at the U. S. National Museum during the month, but do include any of special interest from recent months that were not previously reported.

CITRUS BLACKFLY (*Aleurocanthus woglumi* Ashby) at Miami, Florida, in baggage.

MEXICAN FRUIT FLY (*Anastrepha ludens* (Lw.)), or probably that species, 29 times (2 times in stores, 5 times in quarters and 22 times in baggage). One time each at Calexico, California; Presidio, Texas; and Galveston, Texas. Twice each at Houston, Texas; Tampa, Florida; New York, New York; and Chicago, Illinois. Three times at El Paso, Texas; 7 times at Laredo, Texas; and 8 times at Brownsville, Texas.

WEEVILS (*Baris* sp. and *Brachycerus* sp.). *Baris* sp. found in turnips in stores and *Brachycerus* sp. in garlic in baggage; both at New York, New York.

AN OAK TORTRICID (*Cacoecimorpha pronubana* (Hbn.)) in baggage at New York.

PEACH FRUIT MOTH (*Carposina nipponensis* (Wlsm.)) in stores at Honolulu, Hawaii.

MEDITERRANEAN FRUIT FLY (*Ceratitis capitata* (Wied.)), or probably that species, 38 times (13 times in stores and 25 times in baggage). Twenty-five times at New York, New York. Two times each at Mobile, Alabama; San Juan, Puerto Rico; and Honolulu, Hawaii. One time each at Duluth, Minnesota; Tampa, Florida; Chicago, Illinois; Galveston, Texas; Boston, Massachusetts; Miami, Florida; and San Pedro, California.

ORIENTAL FRUIT FLY (*Dacus dorsalis* Hend.), or possibly that species, 7 times in baggage at Honolulu, Hawaii.

CELERY FLY (*Euleia* (*Acidia*) *heraclei* (L.)), or probably that species, in celery at New York, New York.

CABBAGE MOTH (*Mamestra brassicae* L.) 3 times in stores at New York, New York.

An OLETHREUTID (*Matsumuraeses phaseoli* (Mats.)), a pod borer in Japan, in string beans in stores at Houston, Texas.

EUROPEAN CHERRY FRUIT FLY (*Rhagoletis cerasi* (L.)) 21 times (6 times in stores, one time in cargo and 14 times in baggage). At New York, New York, 19 times and once each at Miami, Florida, and Detroit, Michigan.

A STALK BORER (*Sesamia nonagriodes* (Lef.)), a small grain stem borer of importance in the Mediterranean area and Azores, in baggage at New York, New York.

WHITE GARDEN SNAIL (*Theba pisana* (Müller)) 7 times with general cargo. At Wilmington, North Carolina, one time; Norfolk, Virginia, 2 times; New Orleans, Louisiana, one time; Boston, Massachusetts, 2 times; and Cleveland, Ohio, one time.

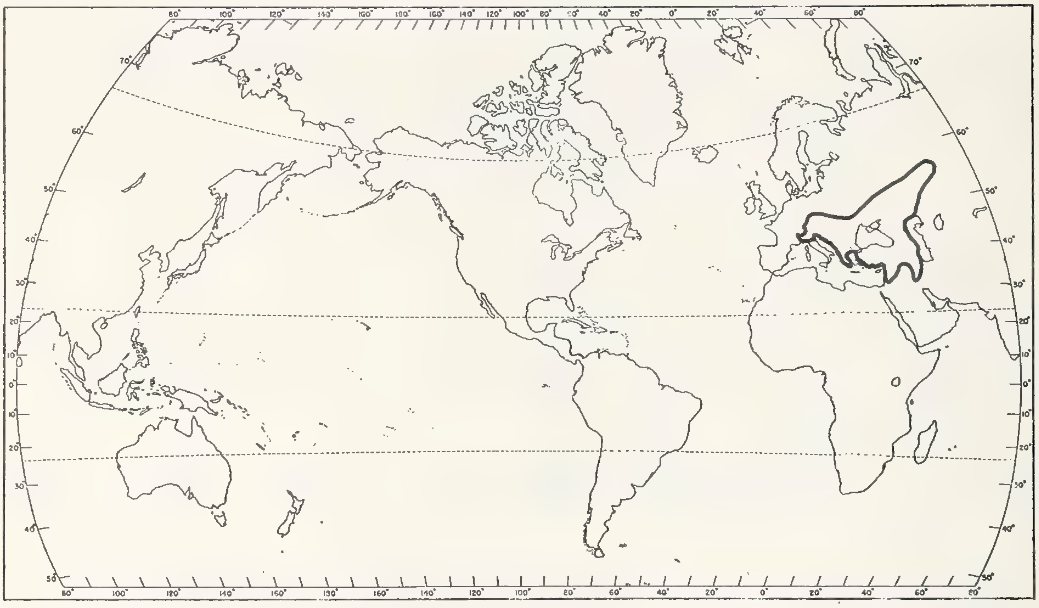
KHAPRA BEETLE (*Trogoderma granarium* Everts), or probably that species, 24 times (3 times in stores, 3 times in ships' holds and 18 times in burlap wrappers of cargoes). Sixteen times at New York, New York. Two times each at Philadelphia, Pennsylvania; Houston, Texas; and Charleston, South Carolina. Once each at Detroit, Michigan, and Duluth, Minnesota.

GOLDEN NEMATODE (*Heterodera rostochiensis* Wr.) 5 times. Two times at Boston, Massachusetts; once in air mail and once in plane's baggage. Once each at Jacksonville, Florida; Detroit, Michigan; and San Francisco, California, in ship's stores, plane's baggage and mail, respectively.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

WHEAT CHAFER (*Anisoplia* *austriaca* Hbst.)

Economic Importance: The genus *Anisoplia* is widespread in the Old World; it extends from Spain and France in Western Europe to the central Siberian lowlands in Asia. It also occurs in north Africa. Over 50 species or subspecies are recorded in the fauna of the USSR. Several species of the genus are recorded as being economically important pests, but *A. austriaca* is considered to be the most important. In the USSR, losses from this scarabaeid in the first part of the decade during 1870-1880 were 100,000,000 rubles. Large sums of money were appropriated and spent for control of the pest in the southern part of Russia in the 19th Century. It was reported under experimental conditions in Bessarabia (USSR) that hard varieties of wheat may be as much as 40 percent injured, with most of the grain being only partly eaten. Soft varieties of wheat do not suffer too much from the attacks of this insect. Spring-sown barley is attacked to some extent, but injury to oats is negligible. Cultural controls, such as plowing fields immediately after oviposition, planting early growing varieties of wheat, and controlling the adults will reduce damage considerably.



General Distribution of *Anisoplia* *austriaca* Hbst.

Distribution: Recorded in Albania, Austria, Bulgaria, Czechoslovakia, France (?), Germany (Bavaria), Greece, Hungary, Iran (Ardebil, Kurdistan and other western provinces), Italy (Venezia Giulia, Venezia Tridentina, Lombardy), Romania, Turkey, Syria, USSR and Yugoslavia.

Hosts: Wheat, barley, rye, oats and various native grasses, such as quackgrass, brome and timothy.

Life History and Habits: The biology as studied in the USSR is as follows: The life cycle, from egg to adult, takes 2 years. Adult emergence is quite variable, extending for nearly 2 months, but sometimes as little as one month. The peak

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(Scarabaeidae, Coleoptera)

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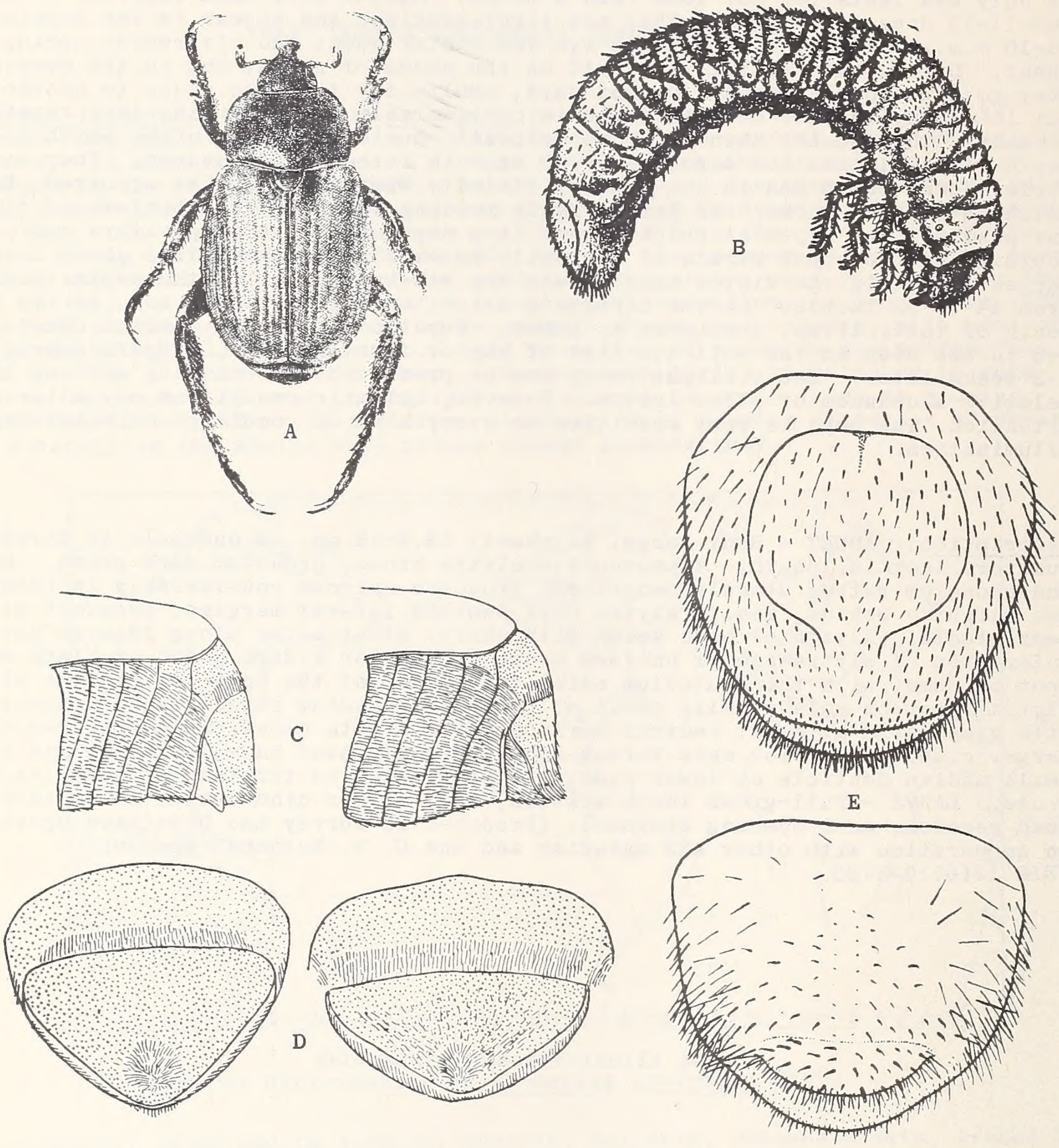
flight is variable; however, it generally takes place from mid-June to the first of July and lasts for not less than 2 weeks. Adults have been reported to live for 11-12 days to 3 weeks. They are light-seeking, and appear in the morning (9-10 a.m.). Adults first attack rye and winter wheat and afterwards spring wheat. During the daytime, they sit on the heads of grain, but in the evening they go down to the ground. On hot days, adults fly from one place to another, but in cloudy weather or when there is considerable wind or rain, they remain dormant. The female, when ready to oviposit, buries herself in the earth to a depth of 4-6 inches and deposits 30-40 eggs in rather small masses. They usually prefer loose earth and in the general vicinity where feeding has occurred. Eggs hatch in about 3 weeks, and larvae begin feeding on humus and rootlets of different plants. The depth at which larvae live depends on the temperature and humidity of the upper strata of the soil; generally it ranges from about 2 to 8 inches except in the winter when larvae are hibernating, then the depth ranges from 14 to 32 inches. Larvae hibernate twice, once each winter and, in the 22nd month of their lives, transform to pupae. Pupation occurs in special chambers 4-6 inches deep in the soil the last of May or first of June. Adults emerge 2-3 weeks later. Heavy flight years may be predicted by obtaining data on the relative abundance of older larvae. However, climatic conditions may alter this situation. The pupa is very sensitive to every kind of condition of moisture and illumination.

Description: ADULT - Body large, thickset; 12.8-16 mm. or one-half to three-quarters inch in length. Appearance - elytra brown, pronotum dark green. Head and pronotum rather densely punctate. Pronotum narrows considerably in front and slightly behind, female elytra have swollen lateral margins, greatest width near middle. Elytra of both sexes with short, stout setae along lateral margins. Coloration of elytra almost uniform brown except for a dark green or black square spot on some, with the scutellum being the center of the spot at the base of the elytra; spot on male usually small or lacking. Pygidium rather densely covered with gray hairs at apex; ventral surface covered with close decumbent gray hair. Larger claw on anterior male tarsus long, strongly bent basally, sometimes with small median denticle on lower side, slightly recurved terminally and apically acute. LARVA - Full-grown larva whitish, 22.5 mm. or nine-tenths of an inch. Head reddish; anal opening diagonal. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies and the U. S. National Museum). CEIR 13(6):2-8-63.

(See illustrations on page 100)

Major references: 1. Edwards, W. H. 1880. The Grain Beetle and Means to Destroy it. 18 pp., St. Petersburg. (Manuscript of translation from Russian accompanied by 2 color plates). 2. Farahbakhsh, G. 1961. Dept. Plant Protect. Minist. Agr., Tehran. Pub. 1:103, Iran. 3. Horion, A. 1951. Verzeichnis der Kafer Mitteleuropas. II. p. 370, Stuttgart. 4. Junk, W. and Schenkling, S. 1915. Coleopterorum Catalogus. Part 66:163. 5. Medvedev, S. I. 1949. Fauna SSSR 10(3):239-272. 6. Porta, A. 1932. Fauna Coleopterorum Italica. Vol. V. p. 438, Piacenza.



Figures of Anisoplia austriaca Hbst.: A, adult male; B, larva; C, terminal abdominal segments of adult (male left, female right); D, pygidium (male left, female right); E, terminal segment of larva, dorsal view above and ventral below.

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